The beliefs about paranoia scale

The Beliefs about Paranoia Scale: Validation of a Metacognitive Approach to Conceptualising Paranoia in People Experiencing Psychosis

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Running Head: Metacognition and paranoia

Background: A metacognitive approach to the conceptualization of paranoia as a strategy for managing interpersonal threat has gained some support. This study reports the validation of the Beliefs about Paranoia Scale (BaPS), a self-report measure to assess metacognitive beliefs about paranoia, in a large clinical sample. We aimed to replicate the factor structure of the measure and to test the hypotheses that both positive and negative beliefs about paranoia would predict the severity of suspiciousness, and that the co-occurrence of positive and negative beliefs would predict increased suspiciousness.

Method: A total of 335 patients meeting criteria for a schizophrenia spectrum disorder completed the Beliefs about Paranoia Scale (BaPS), and were administered the Positive and Negative Syndromes Scale (PANSS) and the Psychotic Symptom Rating Scales (PSYRATS).

Results: Three distinct subscales were measured by the BaPS (negative beliefs about paranoia, paranoia as a survival strategy and normalising beliefs) which replicated the intended factor structure. The scales had good internal consistency (alphas ranging from 0.87 to 0.89) and were correlated with relevant items from the PANSS and PSYRATS. Ordinal regression showed that beliefs about paranoia as a survival strategy and negative beliefs about paranoia both predicted severity of suspiciousness. The co-occurrence of survival beliefs and negative beliefs about paranoia also predicted increased levels of suspiciousness.

Conclusions: All hypotheses were confirmed, suggesting that a metacognitive approach to the conceptualisation of paranoia as a strategy for managing interpersonal threat may have utility for understanding clinical paranoia. The clinical implications for interventions for paranoia are discussed.

Introduction

Paranoia has been defined as 'a disordered mode of thought that is dominated by an intense, irrational, but persistent mistrust or suspicion of people and a corresponding tendency to interpret the actions of others as deliberately threatening or demeaning' (Fenigstein, 1984). Freeman and Garety (2000) have since defined paranoid ideation as the belief that harm is occurring or is going to occur, and that the persecutor has the intention to cause harm to the person. It is a frequent symptom of psychosis but paranoid thinking is also common in the general population (Freeman, 2007), which raises questions concerning the factors which contribute to more severe or clinical paranoia (Freeman et al., 2005).

Paranoia can also be conceptualised as a response to a perception of interpersonal threat (Morrison et al., 2005). The self-regulatory model of psychological dysfunction (S-REF) model (Wells and Matthews, 1994) provides a useful framework for understanding paranoia as a motivated response for managing threat, and the transition to perseverative and clinically distressing paranoia. According to the S-REF model, psychological distress is maintained by a pattern of responses called the 'cognitive attentional syndrome' (CAS) consisting of worry or rumination, fixation of attention on threat, and unhelpful coping behaviours. The CAS is controlled by metacognitive beliefs, including positive beliefs which drive more frequent use, and negative beliefs which result in distress and disability. The model predicts that the co-occurrence of positive and negative beliefs is especially problematic, leading to conflicts in self-regulation and a sense of loss of control over cognition and emotion. Applying these principles to a metacognitive model of paranoia, Morrison et al. (2011) outlined how paranoid thoughts could be engaged with or not, in a similar way to the model of worry in GAD (Wells, 1995). A trigger situation or event (e.g. going out and seeing a young male, or having an intrusive image of violence) could activate positive beliefs about paranoia as a method of coping with the perceived threat (e.g., 'It is important to be alert for danger in order to survive'). This could then lead to specific paranoid thoughts (e.g., 'That man is going to attack me'), and in turn, the activation of negative beliefs (e.g., 'My paranoia is uncontrollable') and castrophization (e.g., 'I'm going mad and will end up in hospital again'), leading to emotional distress and attempts to control or avoid paranoia which may maintain the problem.

There is increasing evidence for the role of metacognition in paranoia, which includes meta-worry about the uncontrollability of delusion relevant thoughts as being highly correlated with delusional distress, suggesting that the distress caused by a persecutory delusion is not simply due to the content of paranoid thoughts per se (Freeman and Garety, 1999); positive and negative metacognitions being elevated among people with persecutory delusions (Morrison and Wells, 2003), and metacognitive beliefs being associated with

paranoid ideation in non-patient groups (Laroi and Van der Linden, 2005; Varese et al., 2011) . However, these studies used general measures of metacognitive beliefs about worry and thoughts, such as the metacognitions questionnaire (Cartwright-Hatton and Wells, 1997).

Morrison et al. (2005) developed the Beliefs about Paranoia Scale (BaPS) to specifically assess metacognitive beliefs about paranoia. The measure revealed four subscales (negative beliefs about paranoia, positive beliefs about paranoia as a survival strategy, general positive beliefs and normalising beliefs) in a non-patient sample. Consistent with the metacognitive model, positive beliefs about paranoia as a survival strategy were associated with more frequent paranoid thoughts and negative beliefs were associated with distress due to delusional ideation. Gumley, Gillan, Morrison, and Schwannauer (2011) subsequently developed a brief 18-item version of the BaPS in a non-patient sample, which had a three-factor structure (negative beliefs about paranoia, paranoia as a survival strategy, and normalizing beliefs). They found both negative beliefs and survival beliefs to be predictive of paranoia frequency and distress. The three-factor structure and good internal consistency of the 18-item BaPS has since been replicated in a sample of 122 patients with a diagnosis of schizophrenia spectrum disorder (Morrison et al., 2011). Survival beliefs were found to be associated with severity of suspiciousness, and negative beliefs were higher among those meeting diagnostic criteria for persecutory delusions. A comparison with a non-clinical control group also found that patients scored higher than non-patients on both survival and negative beliefs (Morrison et al., 2011). These studies provide increasing evidence for good psychometric properties of the BaPS and some support for a metacognitive model of paranoia. However, the clinical sample was of a relatively moderate size.

The present study aimed to examine the psychometric properties of the BaPS in a larger clinical sample. This included an exploration of the factor structure of the BaPS and its associations with related items from the Positive and Negative Syndromes of Schizophrenia Scale (PANSS) and the Psychotic Symptom Rating Scales (PSYRATS) to assess concurrent validity and test theory-driven hypotheses. It was expected that the subscales of the BaPS would be replicated in the clinical sample, and that negative beliefs would be associated with distress due to delusional ideation. We hypothesised that both positive and negative beliefs about paranoia would predict suspiciousness ratings on the PANSS. As the metacognitive theory of paranoia posits that the co-occurrence of both positive and negative beliefs that results in problematic paranoia, we also hypothesised that these subscales would interact to predict higher severity of suspiciousness ratings on the PANSS.

Method

Participants

All participants were involved in research trials of cognitive therapy that incorporated the study measures during the baseline assessments. Two of the studies have been published (Morrison et al., 2014a; Morrison et al., 2014b) and the other trial was ongoing at the time of writing (FOCUS trial; ISRCT number 99672552). All participants met International Classification of Diseases–tenth revision (ICD-10) criteria for schizophrenia, schizoaffective disorder, or delusional disorder, or met entry criteria for an early intervention for psychosis service (operationally defined with the PANSS) to allow for diagnostic uncertainty in early phases of psychosis.

Measures

The Beliefs about Paranoia Scale (BaPS) is a self-report questionnaire developed to measure metacognitive processes involved in paranoia by measuring positive and negative beliefs about paranoia. It consists of a number of attitudes and thoughts that people have expressed about paranoia based on clinical knowledge of patients experiencing persecutory delusions (Morrison et al., 2005). Each item is scored on a 4-point scale to measure conviction (1 = not at all, 2 = somewhat, 3 = moderately so, 4 = very much). The revised 18 item short-form version of the measure was developed in a non-clinical sample and was found to measure three factors of negative beliefs about paranoia, positive beliefs about paranoia as a survival strategy, and normalising beliefs (Gumley et al., 2011), which were replicated in a moderately sized clinical sample (Morrison et al., 2011).

The *positive and negative syndrome scale (PANSS)* is a clinician-administered, thirty-item semi-structured interview assessing positive symptomatology, negative symptomatology and general psychopathology (Kay et al., 1987). The present study included four-items from the PANSS thought to be associated with the experience of paranoia. Two items were from the positive symptomatology subscale and included the 'delusions' item (defined as beliefs which are unfounded, unrealistic and idiosyncratic) and the 'suspiciousness/persecution' item (unrealistic or exaggerated ideas of persecution, as reflected in guardedness, a distrustful attitude, suspicious hypervigilance or frank delusions that others mean harm). The other two items were from the general psychopathology subscale and included 'anxiety' (subjective experience of nervousness, worry, apprehension or restlessness, ranging from excessive concern about the present or future to feelings of panic) and 'active social

avoidance' (diminished social involvement associated with unwarranted fear, hostility, or distrust). All items are scored between 1 (not present) and 7 (severe).

The *Psychotic Symptom Rating Scales (PSYRATS,* Haddock et al., 1999) is a clinician-administered semi-structured interview assessing dimensions of auditory hallucinations and delusional beliefs. In the present study, the six items of the delusions scale were examined which included i) the amount of preoccupation with beliefs (time spent thinking about beliefs during the week) ii) duration of preoccupation with beliefs (how long the belief persists when it comes into their mind), iii) conviction in the beliefs (how convinced they are that the beliefs are true), iv) amount of distress (whether the beliefs cause distress and for how much of the time) v) intensity of distress (how severe the distress feels) and vi) disruption (whether the belief interferes with activities, self-care or relationships). All items are scored from 0 to 4, with higher scores showing more severe phenomena.

Data analysis

The data were analysed using SPSS version 19.0 (IBM, Released 2010). Principal components analysis was used to examine the factor structure of the BaPS in the clinical sample. Correlational analyses (Pearson's r) were used to test for associations between the BaPS subscales and items from the PANSS and PSYRATS to assess concurrent validity. Differences in the mean BaPS subscale scores (t-test) were also examined for those with a score of 1 to 4 on the suspiciousness / persecution item on the PANSS versus a score of 5 ('Moderate Severe') or above. This cut-off point was chosen as consistent with one of the criteria for defining the presence of psychosis for entry into clinical trials (whereby all participants must score at least 4 on PANSS delusions or hallucinations, or at least 5 on suspiciousness or persecution, conceptual disorganisation, or grandiosity).

Since the PANSS suspiciousness / persecution item was an ordinal outcome variable, the predictive relationships between the BaPS subscales and this outcome were examined using ordinal logistic regression. The subscale scores were standardized (z-scores) for ease of interpretation of the odds ratios. To test the hypothesis that negative and positive beliefs would interact to predict PANSS suspiciousness / persecution, the ordinal logistic regression model included the standardized subscale scores for negative beliefs, positive beliefs and the product term of these two variables. The assumption of proportional odds was met for the ordinal regression models (showing that the effect of the explanatory variables was consistent across each level of the ordinal outcome variable).

Results

Sample

The number of participants completing the BaPS and PANSS measures was 335. The majority also completed the PSYRATS (n = 322, 91%). The mean age of the group was 40.6 years (*SD*=11.7; range 17–73 years), 66.8% of participants were male and 91.5% were of White ethnicity, with the remainder being from Black (5.2%), Asian (2.7%) and other ethnic groups (0.6%). The mean total PANSS score of the sample was 79.2 (*SD* 13.7), which equates to a 'moderately' ill population on average (Leucht et al., 2005).

Factor structure of the BaPS

Principal components analysis (n = 335) was conducted to examine the factor structure of the BaPS in the clinical sample. The Kaiser-Meyer-Olkin (KMO) statistic was greater than 0.88 ('great' according to Hutcheson and Sofroniou, 1999) which confirms the adequacy of the sample for the analysis, and all KMO values for individual items were above 0.85 which exceeds the acceptable limit of 0.5. Bartlett's test of sphericity χ^2 (153) = 3463, $p < 0.001$, showed that the correlations between items was sufficiently large for principal components analysis. The number of components to extract was determined by the use of parallel analysis, which compares the actual eigenvalues from the data with eigenvalues derived from random, parallel datasets (O'Connor, 2000). Three components were extracted according to the criterion of the eigenvalues being larger than those at the 95th percentile of the random datasets. These components were then subjected to varimax rotation. Table 1 shows the item loadings on the three components of 'survival strategy', 'negative beliefs' and 'normalising beliefs', which were consistent with the intended factor structure. Cronbach's alpha for each subscale was 0.87, 0.88 and 0.89 respectively and was 0.88 for the overall scale, which shows good internal consistency.

Table 1. Factor loadings of the BaPS using varimax rotation

Item / Scale	Loadings on factors 1	2	3
Factor 1: Survival strategy			
It is important to be paranoid	**0.76**	0.02	0.11
If I were not paranoid others would take advantage of me	**0.70**	0.24	0.05
It is safer to be paranoid	**0.76**	0.10	0.12
My paranoia keeps me on my toes	**0.78**	0.19	0.19
Being paranoid keeps me sharp	**0.76**	0.13	0.22
My paranoia protects me	**0.80**	0.09	0.16
Factor 2: Negative beliefs			
My paranoia gets out of control	0.14	**0.80**	-0.01
I get upset when I feel paranoid	0.08	**0.85**	0.07
My paranoia prevents me from doing things I enjoy	0.12	**0.79**	0.06
My paranoid thoughts worry me	0.12	**0.86**	0.08
My paranoia gets exaggerated	0.26	**0.50**	0.21
My paranoia distresses me	0.07	**0.86**	0.05
Factor 3: Normalising beliefs			
Everybody feels paranoid at some time or other	0.08	0.21	**0.77**
Most people get paranoid sometimes	0.05	0.24	**0.79**
Paranoia is normal	0.30	-0.06	**0.65**
Everybody is paranoid on some level	0.12	0.05	**0.85**
Paranoia is something everybody has to some extent	0.10	0.07	**0.88**
Being paranoid is just human nature	0.28	-0.07	**0.71**

Concurrent validity

Correlations between the BaPS subscales and items from the PANSS measuring delusions, suspiciousness/persecution, anxiety and active social avoidance are shown in Table 2. Significant associations were observed for BaPS total score and all four PANSS items. The survival beliefs subscale was correlated with all items and the negative beliefs subscale with three of the four items (with the exception being the delusions item). Normalising beliefs were not correlated with any of the PANSS items.

Table 2. Correlations between the BaPS and PANSS items

	PANSS Item			
	Delusions	Suspiciousness / persecution	Anxiety	Social avoidance
Total BAPS score	0.150**	0.279**	0.309**	0.199**
Survival strategy	0.157**	0.220**	0.177**	0.188**
Negative beliefs	0.085	0.319**	0.424**	0.306**
Normalising beliefs	0.093	0.066	0.059	-0.071

Table 3 shows the mean BaPS subscale scores among those classified as having moderate to severe scores on the PANSS suspiciousness/persecution item (5 or above) versus lower scores. Significant differences were observed for the BaPS total score as well as the survival and negative beliefs subscale, suggesting the ability of the measure to distinguish between the two groups.

Table 3. Mean BaPS scores among lower versus higher scorers on the PANSS suspiciousness/persecution item

	PANSS suspiciousness < 5 Mean (sd)	PANSS suspiciousness 5 + Mean (sd)	*p*-value
Total BaPS score	37.64 (9.99)	41.79 (11.12)	<.001**
Survival strategy	9.43 (3.63)	11.14 (5.17)	.001*
Negative beliefs	14.66 (5.25)	17.19 (5.06)	<.001**
Normalising beliefs	13.54 (4.73)	13.46 (4.80)	.877

Significant correlations were also observed between the BaPS survival and negative beliefs subscales and the PSYRATS delusions subscale (Table 4). The PSYRATS items measuring the amount and intensity of distress had larger correlations with the BaPS negative beliefs. Both survival beliefs and negative beliefs about paranoia were correlated with the PSYRATS duration of preoccupation item.

Table 4. Correlations between the BaPS and PSYRATS items

	PSYRATS Item from the delusions subscale						
	Amount of preoccupation	Duration of preoccupation	Conviction	Amount of distress	Intensity of distress	Disruption	Subscale total
Total BAPS score	0.085	0.150**	0.114*	0.263**	0.262**	0.089	0.226**
Survival strategy	0.109	0.123*	0.137*	0.140*	0.180**	0.147**	0.166**
Negative beliefs	0.069	0.167**	0.063	0.373**	0.326**	0.082	0.270**
Normalising beliefs	0.010	0.037	0.055	0.044	0.058	-0.033	0.052

Predictive validity

BaPS negative and survival beliefs both predicted PANSS suspiciousness ratings independently of one another when entered together with normalising beliefs in a multivariate ordinal logistic regression model (Table 5). These findings remained significant after adding PANSS anxiety and depression scores to the model: the odds ratios and 95% confidence intervals for survival and negative beliefs were 1.06 (1.01, 1.12), $p = 0.001$ and 1.08 (1.03, 1.13), $p = 0.012$ respectively. Furthermore, as hypothesised, the co-occurrence of negative and survival beliefs predicted greater severity of PANSS suspiciousness as shown by the significant interaction term (Table 6). The entry of the interaction term removed the effect of the negative and survival subscales as independent predictors of PANSS suspiciousness. The interaction term also remained significant after controlling for PANSS anxiety and depression (OR 1.01, 95% CI 1.00 to 1.02, $p = 0.024$).

Table 5. BaPS subscales as predictors of PANSS suspiciousness / persecution

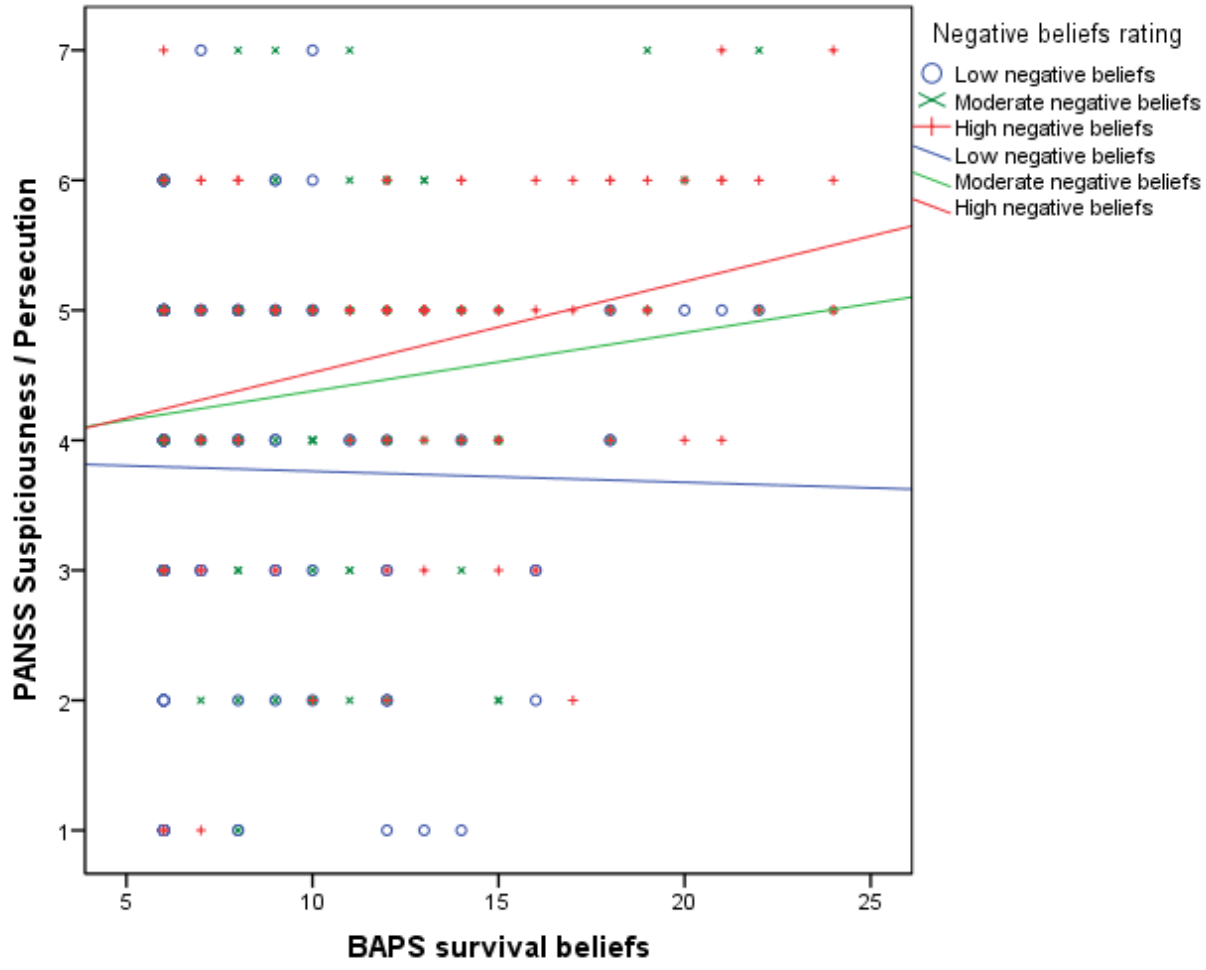
Variable	Odds Ratio	95% CI	*p*-value
Survival beliefs	1.07	1.02, 1.12	.007*
Negative beliefs	1.10	1.06, 1.15	<.001**
Normalising beliefs	0.97	0.93, 1.02	.225

Table 6. Interaction between survival and negative beliefs on PANSS suspiciousness/persecution

Variable	Odds Ratio	95% CI	*p*-value
Survival beliefs	0.89	0.76, 1.04	.132
Negative beliefs	1.00	0.92, 1.09	.948
Survival by negative beliefs	1.01	1.00, 1.02	.021*

Figure 1 details the nature of the interaction, showing that survival beliefs were only associated with PANSS suspiciousness when negative beliefs were simultaneously high. The correlation coefficients between survival beliefs and PANSS suspiciousness for the different levels of negative beliefs (split by percentiles of 33.3) were r = -0.02, p = 0.836 for low negative beliefs, r = 0.146, *p* = 0.136 for moderate negative beliefs and r = 0.308, *p* = 0.001 for high negative beliefs).

Figure 1. Scatterplot of BaPS survival beliefs versus PANSS suspiciousness, grouped by BaPS negative beliefs



Discussion

Main findings

The BaPS was found to measure three distinct subscales of beliefs about paranoia in a clinical sample. These subscales of survival, negative and normalising beliefs replicated the intended factor structure and had good internal consistency. The BaPS measure was correlated with anxiety and suspiciousness items from the PANSS and the PSYRATS delusions subscale which suggests concurrent validity. Negative beliefs about paranoia were correlated with delusional distress on the PSYRATS as expected. Our hypotheses that survival (positive beliefs) and negative beliefs about paranoia would both predict suspiciousness ratings on the PANSS were supported. Moreover, the co-occurrence of survival and negative beliefs was found to predict higher PANSS suspiciousness ratings, which is consistent with a metacognitive conceptualisation of paranoia.

Findings in relation to previous studies

The three subscales of the BaPS replicates two previous studies of the 18-item version of the measure (Gumley et al., 2011; Morrison et al., 2011) which suggests reliability of its factor structure. The finding that both survival beliefs and negative beliefs about paranoia were predictive of the severity of suspiciousness provides additional support for the metacognitive model of paranoia (Morrison et al., 2011). This model outlines how positive metabeliefs represent motivation to engage with paranoia as a cognitive attentional response for coping with perceived interpersonal threat, and how negative metabeliefs regarding perceived uncontrollability or harmfulness results in clinically distressing paranoia. The findings are consistent with previous tests of the measure in a smaller clinical sample (Morrison et al., 2011) and non-patient groups (Gumley et al., 2011; Morrison et al., 2005). They also add to a growing body of evidence for the role of metacognition in paranoia (Freeman and Garety, 1999; Laroi and Van der Linden, 2005; Morrison and Wells, 2003; Varese et al., 2011).

A novel finding of the present study was our support for the hypothesis that the co-occurrence of positive and negative beliefs about paranoia would predict more severe suspiciousness on the PANSS. The interaction of these metabeliefs predicted the severity of suspiciousness over and above their independent effect, such that survival beliefs only predicted suspiciousness when negative beliefs were simultaneously high. This suggests that positive beliefs about paranoia as a survival strategy are normal to a degree and not clinically problematic per se, perhaps representing paranoia as an evolved or learnt

response for coping with threat. It appears that only when the paranoia is concurrently experienced as uncontrollable, distressing or interfering with other aspects of the person's life, that it reaches higher levels of clinical severity. According to a metacognitive conceptualisation, this co-occurrence of positive and negative beliefs is said to have a causal role in clinical distress due to contributing to a self-regulatory conflict (Wells, 1995). In the metacognitive model of paranoia (Morrison et al., 2011) this includes conflicting motives to engage with paranoid thinking and threat monitoring, versus motives to avoid or suppress paranoia. The latter promotes cognitive and behavioural control attempts (such as social avoidance, thought suppression and substance misuse) which may lead to vicious maintenance cycles which increase the experience of uncontrollability, disruption and consequent distress. Regarding previous studies, a similar interaction hypothesis has been examined as a predictor of patient status (Morrison et al., 2011). This earlier BaPS study did not find that the co-occurrence of positive and negative beliefs about paranoia predicted a diagnosis of a psychotic disorder versus non-patients, though the outcome may have been too general as opposed to the specific prediction of persecutory delusions. The results of the present study are more likely to be reliable, since the measurement of paranoia is more comprehensive (using PANSS for the whole sample), and the sample size is considerably larger.

Limitations

A strength of the study is the large clinical sample; however, a number of limitations require consideration. The cross-sectional design prevents inferences of causality with respect to testing the model. The metacognitive model outlines how positive and negative metabeliefs contribute to the initial development of paranoia, but they could also develop as consequence of paranoia. For example, positive beliefs could reflect a view of paranoia as necessary given the seriousness of the perceived threat, and negative metabeliefs can also result from the distress and disruption caused by paranoia. Longitudinal or experimental designs are, therefore, required to delineate the precise direction of effects. However, the metacognitive model does account for bi-directional effects in that additional negative beliefs and catastrophisation about paranoia are said to result from appraisal of its distressing consequences, which motivate further unhelpful responses and perpetuate paranoia (Morrison et al., 2011). Therefore, even if such metabeliefs primarily arise as a result of paranoia, they are still likely to have a role in its maintenance and are still a potential target for intervention.

Another limitation is that the main outcome measure for severity of suspiciousness was a single item from the PANSS rather than a designated measure of paranoia. However, all staff received training and supervision regarding use of the PANSS and inter-rater reliability was performed (the intra-class correlation coefficients for the cognitive therapy trials with more than one rater were 0·83, SD 0·12 (Morrison et al., 2014b) and 0.8, SD 0.07 for the ongoing FOCUS trial). The PANSS suspiciousness/persecution item is rated according to symptom severity and disruption, and was included as a measure of clinical paranoia which combined aspects of frequency and distress. It may have been of interest to examine specific outcomes of paranoia frequency versus paranoia distress, but the theorised relationships between positive metabeliefs and paranoia frequency and negative metabeliefs and distress have been previously shown in non-clinical samples (Gumley et al., 2011; Morrison et al., 2011), and the expected relationship between negative beliefs and delusional distress was also shown in the present clinical sample.

The metacognitive model does not specifically address the role of normalising beliefs in paranoia, and as with the previous studies of the BaPS, normalising beliefs were not associated with severity of suspiciousness or dimensions of delusional beliefs. These were included in the measure because they could be viewed as beliefs that should increase as a result of normalising interventions in cognitive therapy, and they may be functional in terms of reducing feelings of shame and increasing willingness to engage with cognitive interventions. However, further research is required to assess the sensitivity of the BaPS subscales to therapeutic change.

Clinical implications

When working with people experiencing distressing paranoia it would be important to assess for positive and negative metabeliefs; for example, by exploring the perceived advantages and disadvantages of paranoia, including the experience of uncontrollability. This could be done verbally or using our questionnaire. It appears unlikely that people would be motivated to reduce their paranoia if they viewed it as necessary for survival; therefore, it may be important to help the person find other ways to increase their sense of personal safety or replace other positive functions before commencing work to reduce paranoia. As described by Morrison and colleagues (2011), a shared view should also be formed about the accuracy of their paranoia, particularly as many patients have had life experiences that promote a paranoid world-view and positive beliefs about the necessity of paranoia. Acknowledging this historically, perhaps by developing a longitudinal formulation (e.g. Morrison, 2001), may

benefit engagement whilst also highlighting the importance of examining the accuracy of their paranoia in relation to current context. If the person holds catastrophic beliefs about paranoia, which are contributing to distress, these could be examined using cognitive techniques and behavioural experiments similar to strategies outlined to modify negative beliefs about worry (Wells, 1997). The provision of normalising information on the common frequency of paranoid thoughts (Freeman et al., 2005) and information about famous people who are known to experience paranoia may also help to reduce feelings of stigma associated with paranoia.

As an alternative to working with the content of paranoid thoughts, there may also be utility in intervening in the process of paranoia as a motivated response to the initial perception of threat, using metacognitive therapy (e.g. Wells, 2008). This may be useful when the person finds the uncontrollability of paranoia as more problematic than the conviction in their thoughts. This could involve a focus on reducing preservative processing (worry and rumination), threat monitoring and self-focused attention, as well as replacing unhelpful behavioural or thought control strategies with more adaptive ways of responding to thoughts. Specific strategies include detached mindfulness, attention training and worry / rumination postponement (Wells, 2008). A recent exploratory trial using metacognitive therapy for psychosis found evidence of acceptability and clinically significant symptom change (Morrison et al., 2014a), although further research is required to evaluate metacognitive therapy for psychosis.

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